

ECONOMIC FORECAST FOR 2011–2013

Eesti Pank's economic forecast has been prepared by experts of the Economics Department and the Financial Stability Department. The forecast has been compiled using the Macro Model of the Estonian Economy, devised and regularly updated by the Research Department of Eesti Pank.

This forecast is based on information available as at 18 May 2011 and will also be published in the central bank's publication Estonian Economy and Monetary Policy No 1/2011.

SUMMARY

From 1 January 2011, the euro is legal tender in Estonia. Joining the euro area reduces transaction costs, diminishes macroeconomic risks, deepens economic ties with other countries, and markedly changes the monetary policy environment in Estonia. Sustainable fiscal policy and successful exit from the global recession have improved the country's credibility and the future outlook.

At the start of 2011, the Estonian economy enjoyed rapid growth owing to soaring export income. Post-recession adjustments improved the competitiveness of the manufacturing sector in external markets. Another factor supporting fast recovery was growth in the demand of our main trading partners. According to the forecast, most of the production capacity that became underutilised in the crisis has been put into use again by now and the economic growth impetus will slow to a sustainable level in the second half of 2011. The remaining idle production capacity may not be fully suitable for servicing demand in the new growth cycle. Consequently, future economic growth depends on investment in increasing and updating production capacity. According to the forecast, Estonia's real GDP reaches close to the pre-crisis level by end-2013.

Substantially faster inflation also indirectly refers

to a decrease in underutilised capacity. For the most part, however, price growth has been brought about by rising food commodity prices in the global market, coupled with more active trading with the neighbouring countries and the price hike of crude oil and agricultural products. Commodity futures show that prices will either halt at the current high level or decline somewhat in the years to come. In other words, upward price pressures from that source will ease from now on and inflation will slow in Estonia. However, the risk of further commodity price growth persists, depending on the speed of global economic expansion. The Estonian electricity market will be fully open from 2013, which is an exceptional inflation factor and means that our electricity price developments will be similar to the Nordic market. Current calculations show this will impact the price level here by 0.7%.

Developments in the global economy and especially in the euro area play the key role in Estonia's future economic success. The European Central Bank expects the euro-area economy to grow by 1.5–2.3% in 2011 and by 0.6–2.8% in 2012. The growth outlooks of Estonia's main trading partners outside the euro area (Sweden, Russia, Latvia, and Lithuania) have also improved. The Estonian economy has greatly benefited from the pick-up in international trade over the past year and a half, being a small link in the international division of labour. Active trading has helped many other countries besides Estonia to reduce recession damages and to restore economic wellbeing.

However, the economic situation is still uncertain in several countries as a result of the ongoing sovereign debt or banking crises. Risks deriving from these problems may spread to countries that are already recovering from the downturn. The global crisis has shown how tight is the economic interdependence between various countries. Many advanced economies have exhausted their policy support measures, so the



global economy's shock resilience is considerably more contained. In such circumstances, a small and open economy needs to have enough savings to cushion the impact of unfavourable market conditions.

Estonia's economic recovery has been uneven. Foreign-owned and export-oriented companies have benefited the most from strong external demand. Their profits have resumed much faster than in the economy as a whole, so GDP growth is surpassing that of GNI. Spillovers from export revenues are finally stimulating fields of activity targeted at domestic demand. For instance, households are more willing to invest and to buy durable goods. Since real estate has become more affordable, transactions in the housing market are on the increase.

Many households revised their consumption habits in the downturn. As a result, saving soared to a historical high in 2009. The household saving rate has declined by now, but it is still higher than before the boom. Consumption expenditures will increase even more, because the fear of becoming unemployed has decreased and general confidence has strengthened. Thus, the saving rate is likely to decline further along with the economic upturn. If lending activity picks up as well, the growth of households' financial savings may turn out to be too slow to withstand future shocks. The low level of accumulated savings available forced households to quickly curb their spending, which further boosted the recession. If people saved more in good times, it would help to smooth consumption over time.

The government's fiscal objective is to reach a nominal surplus in 2013 and there will be no considerable changes in fiscal policy in 2011–2013. According to the baseline scenario of Eesti Pank's forecast, this objective is sensible and, if expenditure increases are constrained, also rather easily attainable. At the same time, the recent crisis experience showed that the objec-

tive of a fiscal balance or a surplus by itself is not sufficient in the rapidly changing economic environment. It is difficult, maybe even impossible, to assess a current business cycle situation and to differentiate between one-off excessive tax revenues and sustainable tax income. Thus, the fiscal policy framework should be supplemented expenditure rules that would directly rein in costs.

The post-crisis adjustment of the labour market is still underway, though unemployment shrank notably in 2010. The ongoing increase in long-term unemployment is a challenge to labour-market institutions helping the jobless to get necessary retraining and supporting the preservation of skills. Insufficient labour force may also prove to be a problem in Estonia in the future. In addition to ageing population, there occurred a notable increase in people going to work abroad in the second half of 2010. This may be interpreted as a hidden cost of the steep recession, especially if they stay abroad for a long time.

Compared to Eesti Pank's 2010 autumn forecast, the wage growth forecast is substantially higher now. Wage pressures may pose a threat to the economic balance both in the coming years and in a slightly longer term. The nearly 5% year-on-year average wage growth in the first quarter of 2011 was rather rapid against the background of high unemployment. The growth was caused by dynamic productivity growth at end-2010 and one-off factors, such as the restoration of wages that were cut during the recession.

In both 2011 and 2012, it is important to keep the current high inflation from passing through to wage growth, since this could bring about additional price increases. Wage growth should not be tied to inflation; otherwise the competitiveness of the economy will suffer. From the viewpoint of macroeconomic stability, the entire remuneration or at least some of its relevant components should depend on labour productivity. Diver-

gence from this principle caused an economic weakness here in 2006–2008, since the ratio of labour costs to profit was unsustainable.

Accelerating economic growth has so far not resulted in a pick-up in credit volumes. The latter will remain modest in the next years as well, although export income and wage growth have contributed to corporate and household borrowing ability. The situation of banks operating in Estonia is improving. The banking sector is posting profits again, owing to shrinking provisions and lower resource costs. Banks' capitalisation is strong and they have ample funds to lend, because deposits have increased. Looking ahead, it is important that banks be willing to take risks and to finance projects that are essential to sustainable economic growth.

This forecast has four boxes of background information. The first one provides an overview of changes in the monetary policy environment. The second box is looking at the impact of volatility on economic growth, concluding that countries with higher volatility normally have slower growth. The third box is a technical analysis of the market share of the Estonian exports, and the fourth box treats the impact of the adoption of the euro on inflation in Estonia.

EXTERNAL ENVIRONMENT

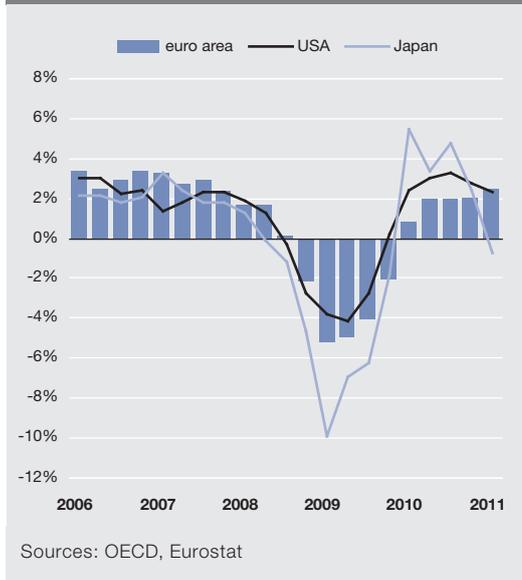
The growth in international trade and the inventory cycle breathed life into global economy, with the recovery being quicker than expected. Further growth may be hampered by the lessening of fiscal policy stimuli and countries' debt problems. At the same time, it seems that the recovery has taken a sustainable path, increasingly relying on the growth in private consumption and investment activity alongside exports. The process is positively affected by the prevailing cautious optimism and the consistency of problematic countries in implementing consolidation measures. At the same time, global economic

growth is held back by the sluggish recovery of employment in many economic areas, and complications in the implementation of the required reforms.

The recent years' global economic growth has been strongly supported by Asian countries, where growth is expected to decelerate in the near future. High demand and inflation in different emerging Asian economies are a sign of overheating and require tighter monetary policy. Otherwise, the rapid growth would continue raising commodity prices and boosting inflation. The cooling of overheated economies will affect global growth and is liable to reducing Estonia's external demand. The aftermath of the natural disaster in Japan may also stifle global growth in the near future. Although Japan is a minor contributor to Estonia's foreign trade, we may still experience the negative effect of the disaster through international supply chains.

The US economic growth (see Figure 1) decelerated in the first quarter of the year to an annual

Figure 1. Economic growth in advanced economies



2.3% (2.8% in the fourth quarter of 2010). Fiscal problems prevail and the situation in the real estate sector remains complicated.

The faster-than-expected global economic growth supported exports in the euro area, and the confidence of enterprises remained high. Even though economic growth in the euro area has been faster than forecasted, countries will need to consolidate their budgets to restore the confidence of the financial markets and to reduce the debt burden. The fiscal situation in many countries remains problematic: the Government of Portugal has requested help from the European Union and the IMF, while Greece has failed to fully adhere to the objectives established in the bailout programme. Fiscal and sovereign debt problems in Ireland and several other EU Member States have reduced public confidence and the sense of security. Due to growing concerns about the sustainability of countries with a high sovereign debt, tensions started brewing in the euro area securities market at the beginning of 2011. The interest rates on the government bonds of several euro area countries rose, rendering debt financing more expensive for them. These problems may pass through to real economy and hamper further recovery.

The 2011 growth outlook for Estonia's main trade partners, Sweden and Finland, has improved to some extent, compared to the last autumn's forecast. Sveriges Riksbank has balanced the economy by raising interest rates and is expected to continue doing so in 2011. Regardless of the last year's heavy drought, the Russian economy has made a remarkable recovery on the back of commodity price growth, with commodity exports providing sufficient support to further expansion. Economic growth in Russia could still be inhibited by high inflation. To keep inflation in check, the central bank has raised the key interest rates twice this year. In addition to raising interest rates, the central bank has pursued the policy of strengthening the rouble, even

though the effect on inflation is yet to be seen. The Latvian and Lithuanian economies are also recovering from the crisis, faster than expected in the autumn forecast. Economic growth is mainly fuelled by export demand, but domestic demand is also slowly recovering.

Various 2010 autumn forecasts revolved around the perception that risks related to the price stability outlook for the euro area would remain more or less in balance in 2011, with an acceleration in the price increase only forecasted for the first few months of the year. Above all, the upward pressures were related to developments in energy and other commodity prices. It was also believed that, due to the need for budget consolidation, indirect taxes and administered prices might show a faster-than-expected rise in the coming years. Inflation rates continued to increase, fuelled by rising commodity prices, at the beginning of 2011. In March, the Governing Council of the ECB raised the key interest rates, because, based on economic analysis, there were upward pressures prevailing in the inflation outlook, although the pace of underlying monetary expansion was moderate and general uncertainty remained at a high level. The key interest rates were raised with the aim of managing the upward pressures endangering price stability. The monetary policy environment is described in detail in Box 1.

Despite the recent pick-up in inflation, broad-based inflationary pressures should not increase in the medium term. The Governing Council of the ECB stands ready to take steps to prevent the materialisation of the upward pressures endangering price stability in the medium term. The 3-month Euribor – the European interbank short-term interest rate, which also reflects the cost of credit in Estonia – thus continues on a rising trend. Compared to the autumn forecast's external assumptions, those concerning the key interest rate and commodity prices have changed. The 3-month Euribor has seen

Table 1. External-environment related forecast prospects

	2009	2010	2011	2012	2013	2010*	2011*	2012*
External demand growth (%)	-17.2	8.8	7.6	7.0	6.7	6.6	6.3	6.6
Oil price (USD/barrel)	61.9	79.6	111.1	108.0	103.7	78.8	84.0	86.8
Interest rate (3-m Euribor, %)	1.2	0.8	1.6	2.3	2.8	0.8	1.1	1.4
USD/EUR exchange rate	1.4	1.3	1.4	1.4	1.4	11.9**	12.0**	12.0**

* 2010 autumn forecast

** USD/EEK exchange rate

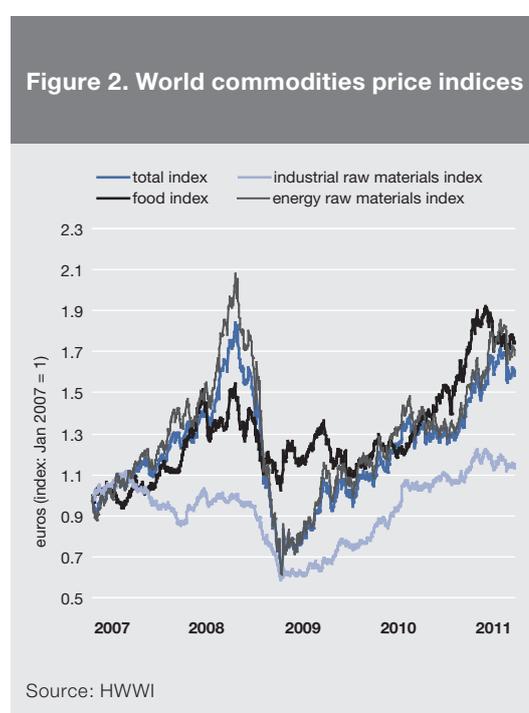
Sources: Reuters, Eesti Pank

an upward adjustment since autumn, and is expected to reach 2.8% in 2013 (see Table 1).

With the recovery of economic activity, the global market saw a rise in all main commodity prices (see Figure 2). Energy and commodity prices were mainly influenced by demand growth in Asia. Price hikes were also fuelled by the recovery in advanced economies and by unfavourable weather conditions in the second half of 2010. Energy prices are also significantly affected by the Middle East and North Africa, where the political situation has exerted pressure on oil production. Among the key factors influencing the price are also the oil production reserves, which have dropped to a very low level due to civil unrest in the Middle East and North Africa. Compared to autumn, oil prices have risen faster than indicated by futures prices, rising to 111 USD per barrel in 2011. For the European consumer, the oil price hike has been cushioned by the 15% strengthening of the euro against the US dollar over the past 12 months. Even though oil price volatility is expected to be high over the forecast horizon, the assumption (based on future oil prices) of a drop in oil prices (to a level of 104 USD per barrel in 2013) is prevalent in the market.

The relative price level in Estonia – the real effective exchange rate (REER)¹ – supported Estonia’s competitiveness in external markets. Decreasing by 2.3% in 2010, REER dropped by 1.2% in the

¹ REER shows how prices in Estonia have moved compared to the weighted average prices of the main trading partners, considering also price and exchange rate dynamics.



first quarter of 2011 due to accelerating inflation (see Figure 3). The nominal effective exchange rate (NEER)² decreased by 3.1% in 2010 and by 2.4% in the first quarter of 2011, indicating the strengthening of the trade partners’ against the currency used in Estonia. Above all, this concerns the Swedish krona, which reached its highest value in the last decade at the beginning of 2011.

² NEER only considers exchange rate dynamics.

Figure 3. NEER and REER yearly growth rates



Box 1: Monetary policy environment

From 1 January 2011, Estonia is a euro area Member State and Eesti Pank belongs to the Eurosystem, which consists of euro area National Central Banks (NCBs) and the European Central Bank (ECB).

The euro area monetary policy framework comprises regular refinancing operations (i.e. repo auctions), the minimum reserve system and standing facilities (i.e. marginal lending and deposit facilities). The Eurosystem has established a 2% reserve requirement for the liabilities in the balance sheet of credit institutions with maturity of up to 2 years.

Due to the changeover to the euro, the reserve requirement in Estonia was gradually lowered from 15% to 2% in the euro area from September 2010 onwards. From the beginning of 2011, all credit institutions in Estonia must thus adhere to the 2% reserve requirement. Unsurprisingly, the change of the reserve requirement failed to trigger significant changes in banks' behaviour.

The monetary policy environment remained lenient throughout 2010. Euro-area monetary policy rates stood low, as the key policy rate of the European Central Bank retained the 1% level established in May 2009 (see Figure a). As a result of the imminent adoption of the euro, risk premia in the local money market fell significantly in 2010. At the start of the year, the 6-month Talibor of the local money market exceeded the 6-month Euribor by nearly three times, but the the euro area and the Estonian interest differences were smoothed out by the end of the year, with the Talibor dropping to the level of the Euribor.

Due to growing price pressures in the euro area, the ECB's Governing Council decided to raise the key interest rate by 25 basis points to 1.25% at its meeting on 7 April. The marginal lending facility interest rate was raised by 25 basis points to 2% and the deposit facility interest rate by 25 basis points to 0.5%. These changes, along with expectations of a rise in key interest rates, are also reflected in the money market interest rates – for example, the 3-month Euribor advanced by 43 basis points and the 6-month Euribor by 49 basis points from the beginning of the year to the end of May (see Figure b). On the one hand, this will increase the cost of borrowing for the private sector, but on the other hand, depositing will become more attractive.

Figure a. Euro area monetary policy interest rates

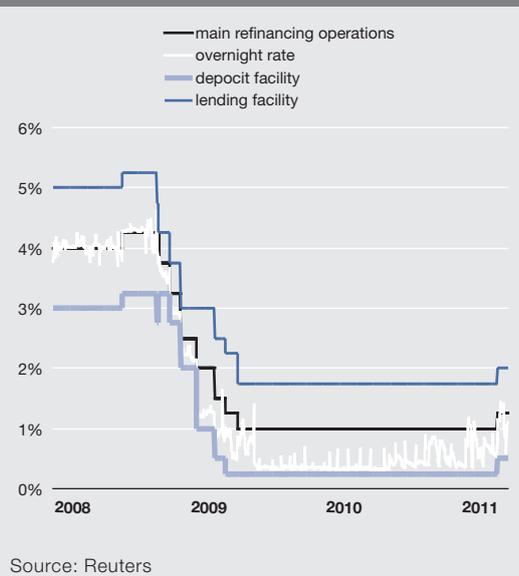
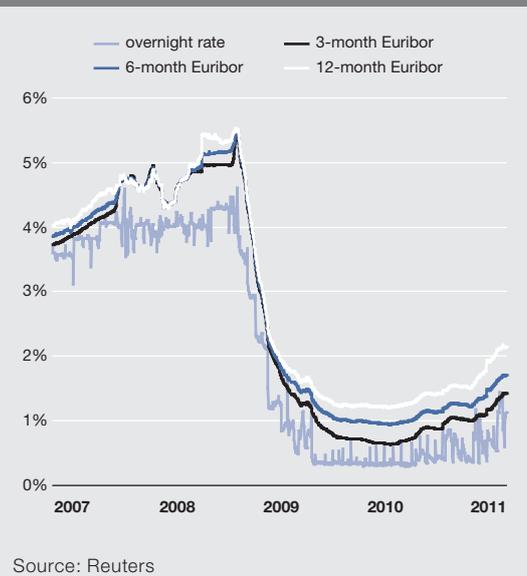


Figure b. Euro area money market rates



BASELINE FORECAST SCENARIO

Economic activity

Followed by a steep decline in 2009, Estonia's real GDP increased by 3.1% in 2010. The resumption in economic activity was conditioned by several factors. Firstly, the pick-up in economic activity of the euro area and Estonia's main trading partners, fuelled by global economic growth and recovery of international trade. Secondly, the positive effect of the inventory cycle, with the recession-time reduction in inventories followed by the accumulation of new inventories upon recovery. Thirdly, the upturn in private consumption and investment, which partly reflect a rise in confidence compared to the previous level. The recovery of economic activity has been supported by the euro area monetary policy and measures taken to ensure the functioning of the financial system.

Macroeconomic developments at the end of 2010 and the beginning of 2011 exceeded the expectations of the autumn forecast, encouraging an upward adjustment in the macroeconomic projections. According to the flash estimate, economic growth in the first quarter of 2011 was 8%, year-on-year. The economy grew by 2.1% on the previous quarter. This is comparable to the years of rapid growth. We must still consider that growth partially relies on short-term factors generated by the reactivation of production and the recovery of orders in the tradable sector. The economic growth will thus slow, posting markedly smaller results in the second half of 2011. Growth will be slower compared to the pre-crisis pace and the economy is expected to reach close to the pre-crisis level at the end of the forecast horizon.

In the long term, the growth rate of the Estonian economy will depend on the increase in pro-

duction capacity. This means that production capacity needs to be enhanced, so new investments as well as the development of labour and technologies are needed. We must also consider the contraction in the working population, which is affected by the low birth rate on the one hand and emigration to countries with a higher wage level on the other hand. Since it is unclear how much of the boom-time production capacity can serve the new economic cycle, we cannot rule out that the Estonian economy is already operating close to its potential. Even though idle machines can be readjusted and unemployed persons retrained, the process has its limits.

The difference between actual and potential output is referred to as the GDP gap. Idle resources produce a negative GDP gap, generating no price pressures. When the gap is positive, production capacity is exploited beyond the optimum level, generating price pressures. Increasing price and wage pressures may indicate that the potential output has almost been reached. Where the resources are idle, the price of excessive resources should decline until the resources are utilised. The past 12 months, however, have witnessed a price hike. According to the baseline scenario of this forecast, a portion of the production capacity is idle and the GDP gap is negative, though it has significantly contracted compared to 2009 and 2010. This indicates that future growth will be slower than in the past quarters, as the gap between the actual output and potential output is eroding, and less growth can be generated by reutilising idle production capacity.

The Estonian economic growth was highly volatile in 2000-2010, ranging from -17% to +12%. Despite the high growth figures in the rapid growth years, the average economic growth for the decade is 4.7%. The relation between the volatility of economic growth and average economic growth is discussed in Box 2.

Table 2. Economic forecast by key indicators

						Difference from previous forecast		
	2009	2010	2011	2012	2013	2010	2011	2012
GDP (EUR billion)	13.9	14.5	15.9	17.1	18.4	0.3	0.8	1.0
GDP, chain-linked volume change (%)	-13.9%	3.1%	6.3%	4.2%	4.2%	0.6%	2.2%	0.4%
HICP inflation(%)	0.2%	2.7%	4.7%	2.5%	2.9%	0.3%	2.0%	0.8%
GDP deflator change (%)	-0.1%	1.5%	2.8%	3.2%	3.5%	1.6%	1.0%	0.5%
Current account (% of GDP)	4.5%	3.6%	1.7%	1.0%	-0.2%	2.3%	4.3%	3.8%
Private consumption expenditures, chain-linked volume change (%)	-18.8%	-1.9%	2.8%	4.8%	5.4%	-1.0%	-3.9%	0.4%
Government consumption expenditures, chain-linked volume change (%)	0.0%	-2.1%	2.1%	0.6%	1.0%	-1.2%	1.8%	0.1%
Fixed capital formation, chain-linked volume change (%)	-32.9%	-9.2%	25.3%	13.2%	9.7%	-2.1%	8.4%	4.0%
Exports, chain-linked volume change (%)	-18.7%	21.7%	22.5%	4.7%	6.4%	7.4%	16.1%	-2.2%
Imports, chain-linked volume change (%)	-32.6%	21.0%	22.6%	6.3%	8.6%	3.2%	12.1%	-1.5%
Unemployment rate (%)	13.8%	16.9%	13.0%	11.5%	10.1%	-0.9%	-1.8%	-1.9%
Employment growth (%)	-9.9%	-4.8%	5.1%	1.4%	0.9%			
GDP growth per person employed (%)	-4.5%	8.3%	1.2%	2.8%	3.3%			
Real compensation per employee growth (%)	-2.4%	-2.3%	-1.8%	3.7%	3.3%			
Compensation per employee growth (%)	-3.3%	-0.2%	3.2%	6.1%	6.3%			
Nominal money supply growth (%)	0.8%	3.0%	5.0%	7.9%	7.8%	-2.6%	-2.2%	1.3%
Credit stock growth (%)	-6.2%	-6.4%	-3.2%	4.0%	7.5%	-2.7%	-4.2%	2.6%
Gross external debt (% of GDP)	125.5%	114.2%	100.9%	92.7%	88.0%	-6.3%	0.0%	-3.6%
General government budget balance (% of GDP)	-1.8%	0.1%	0.0%	-1.6%	0.4%	1.3%	1.1%	-0.3%

Sources: Statistics Estonia, Eesti Pank

Box 2. The impact of volatility on economic growth

The Estonian economy is characterised by a high degree of cyclical volatility. Prior to the eruption of the global financial crisis, the Estonian economy experienced a prolonged period of very strong economic growth but during the global recession, it witnessed one of the largest declines in output. For this reason, the high degree of cyclical volatility of the Estonian economy calls for an assessment of its potential impact on long-term economic growth. For that purpose the experience of other countries is examined.

An often-cited paper that demonstrated the presence of a significant negative relationship between the volatility of economic growth and the average growth level was a research by Ramey and Ramey (1995). Their data covered 92 countries for the period of 1962–1985; the dependent variable was per capita output growth, and volatility was measured as variability in output growth. The estimation results of Ramey and Ramey implied that an increase in volatility would reduce the average level of economic growth. The negative effect of volatility was lower for the advanced countries and higher for developing countries. Importantly, this negative relationship was significant despite the fact that the authors took into account the impact of investment on growth. This means that volatility is reducing growth not (only) by lowering investment but via some other mechanism(s) as well. More recent re-estimations of the Ramey and Ramey equations using updated data series (Aghion and Banerjee, 2005) confirm these results, though

the negative effect of volatility on growth is less clear for the OECD countries.

Today, the idea that volatility and economic growth are negatively related is quite widely accepted. For example, Easterly et al. (2000) take that as given, and raise an important follow-up question: if macroeconomic volatility is bad for growth, what causes it? In particular, Easterly et al. (2000) argue that when trying to explain output volatility, too little attention has been paid to the crucial role of the financial sector and financial factors in general.³ Using data for a large number of countries, they find that the private credit to GDP ratio, a proxy for financial sector development, is related to volatility in a non-linear way: up to a certain point (the credit to GDP ratio is below a certain level), the financial sector plays a stabilising role, but as it gets deeper and more sophisticated its association with volatility becomes positive. Instead of diversifying and insuring risks, very advanced financial sectors may, in fact, create additional risks. In the backdrop of the recent recession, this argument appears particularly relevant and appealing today.⁴

However, it has to be kept in mind that these earlier empirical estimates are based on data until 2000 and therefore do not include the latest data preceding the global financial crisis and the data during the financial crisis that might potentially change the earlier conclusions. For this reason, Eesti Pank carried out a study to estimate the impact of volatility on economic growth by using more recent data until 2010. Furthermore, a slightly larger sample of countries (121) was used.

Using more recent data and a broader sample of countries, the study by Eesti Pank confirmed the result reached by Ramey and Ramey (1995) that macroeconomic volatility is negatively related to economic growth. Eesti Pank's estimates for the whole sample of 121 countries indicate that a 50 percent increase in volatility translates into 0.4 percentage point lower annual per capita growth. The analogous estimate based on the sub-sample of OECD countries is about 10 percent smaller but statistically indistinguishable from the whole-sample result. These results indicate that policies and institutions that mitigate cyclical volatility may be conducive for long-term growth.

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³ Financial institutions, cash flow constraints, firm wealth effects and other balance sheet effects.

⁴ Easterly et al. (2000) also find that volatility is typically higher in developing countries and countries more open to international trade. Concerning the latter, they note, however, that openness is also known to contribute to growth itself, and so the overall effect is likely to be positive.

Domestic demand

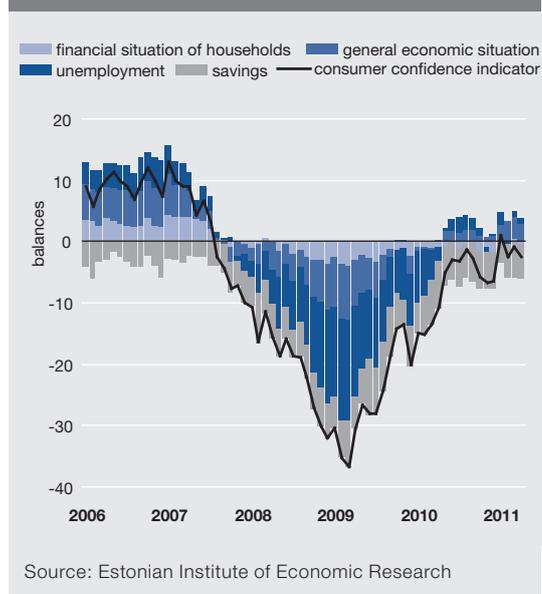
Private consumption

The recession-time uncertainty – the fear of losing one’s job as well as concerns about the deterioration of the economic situation increased precautionary saving. By now, these fears have withdrawn and the confidence of households has been restored (see Figure 4). This is reflected by the consumption of durable goods which showed a significant rise in the second half of 2010, compared to 2009. At the same time, the share of durable goods in the consumption basket is still lower than in the pre-boom years.

Acceleration in the growth of retail sales at the beginning of 2011 corresponds to the recovery of consumption. The sale and repair of motor vehicles has shown the highest growth, with the retail sales volume index rising by 66% in March 2011. Growth in that commodity group is expected to slow further on, due to the high reference base. Annual growth in the registration of passenger cars decelerated to 69.5% in April, compared to the 80% in March. Still, motor vehicles are a minor contributor to retail sales, and total retail sales growth has been slower, amounting to 8% in March. Retail sales in non-specialised stores (supermarkets) predominated by food commodities have decreased. This is partly due to changes in household preferences, considering that sales in stores specialising in food commodities have increased faster than the average. On the other hand, the rapid increase in food prices has made consumers very selective and forced them to weigh their purchasing decisions. Further price increases may also cause a setback in the recovery of private consumption.

The relatively quick lowering of unemployment and wage growth have increased households’ disposable income. On the other hand, fuelled by the global food and energy price hikes, inflation will have a negative effect on households’ purchasing power. The rise in interest rates will

Figure 4. Consumer confidence indicator



also decrease the disposable income of households, because their deposits are smaller than their borrowings. According to Eurostat, interest earned by households amounted to an average of 4% of disposable income in the euro area countries and 3.2% in Estonia in 2009. Interest paid by households amounted to 2.4% of disposable income in the euro area, and 6.6% in Estonia. This means that the net effect of interest rates has reduced the disposable income of the Estonian households.

One of the key factors boosting household savings during the recession was uncertainty regarding future income, triggered by the financial crisis and waning economic activity. Employment contracted markedly during the downturn, while unemployment soared. Being concerned about their jobs, households were prompted to reduce expenses and increase savings. The consumer sentiment indicator since the end of the recession indicates that households are more optimistic towards the economic situation, especially towards unemployment. Fears are withdraw-

ing and confidence has been restored. These changes are reflected with a lag in consumption as people's habits are slow to change and the experience of the recent crisis calls for caution. In foresight, the declining saving rate could result in a rise in private consumption that is quicker than the increase in income (see Figure 5).

According to the spring forecast, the household saving rate will continue to fall but it will still be higher than before the crisis. The boom-time loan burden growth facilitated the unsustainably low saving rate and therefore hampered future consumption due to increased loan repayments. The slower increase in income and a higher debt burden compared to the pre-crisis period do not support a rise in asset prices, but rather endorse a more balanced development. A quick rise in asset prices and growth in consumption due to increased nominal wealth is still a risk that may affect the private consumption forecast.

Investment

As expected, investment growth picked up speed in the second half of 2010. Investment in transport equipment posted the largest growth (370%) in the last quarter of 2010. This is impressive, albeit part of the growth can be attributed to one-off transactions. Investment in computers, machinery and equipment and dwellings increased as well, whereas investment in other buildings and structures remained modest.

Capital goods imports and the structure of industrial production support investment growth. In the first quarter of 2011, capital goods imports grew by 81%, indicating acceleration in investment growth. The annual rise in the volume index for other mining, which serves as an indicator of construction volumes and reflects the mining of stone, sand and clay, accelerated to 46% in March.

Compared to the pre-crisis years, the investment level is currently low, and investment growth

Figure 5. Real private consumption growth

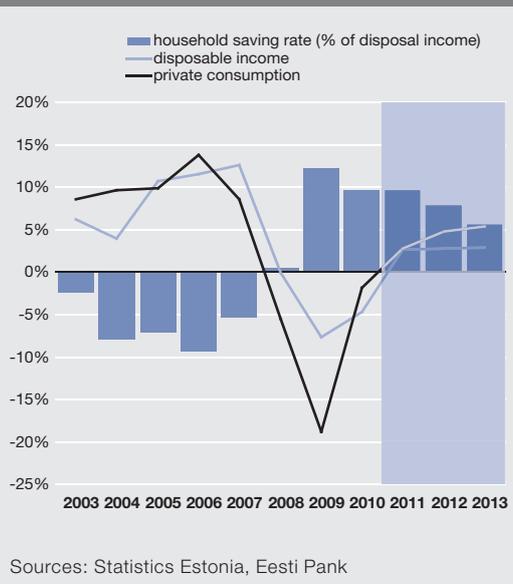
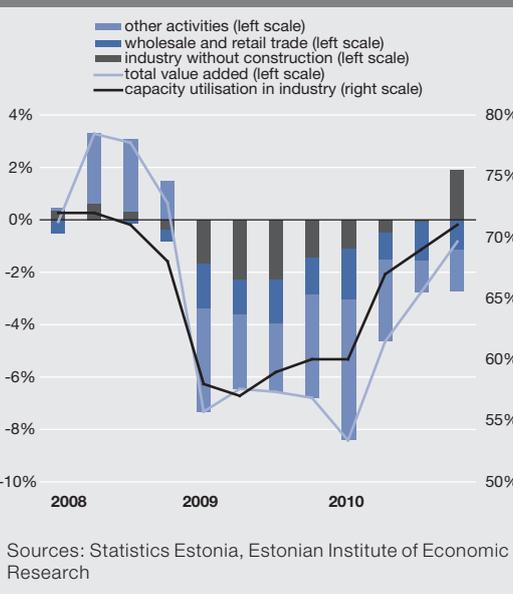


Figure 6. Value added compared to the average level for 2007



could prove quite substantial, considering the modest reference base. The investment cycle is characterised by two-speed economic recovery: even though the gross value added currently falls short of the pre-crisis level, production volumes in several fields of activity in the manufacturing sector are breaking records, with new investment required for further growth (see Figure 6).

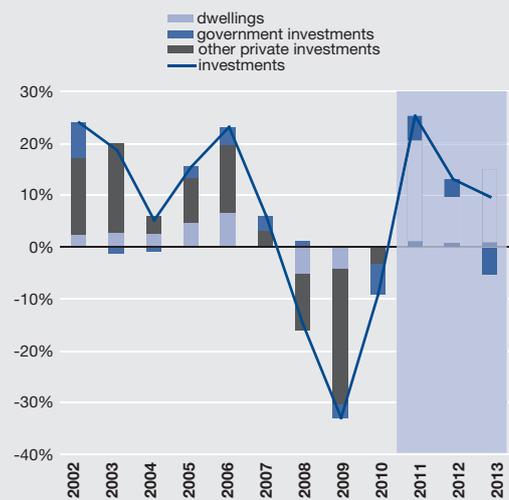
In the coming years, the volume of investment required for securing sustainable economic growth (measured as a ratio to GDP) could prove much smaller than in the boom time. Firstly, the exploitation of production efficiency enhancing technology and equipment is not fully covered in GDP by the notion of capital formation, if installation of new equipment is preceded by the un-installation and disposal of older and less efficient equipment the use of which is no longer economical, considering alternatives. Secondly, a new plant is not necessarily required for enhancing production volumes – replacement of the old equipment or installation of new equipment will do.

Investment in dwellings is also on the rise. On the one hand, there is an increased demand for energy efficiency, so more investments are made to improve the thermal resistance of buildings. On the other hand, the improving economic situation will urge people to upgrade their living conditions, resulting in an increased demand for higher-quality residential space. In the long term, investment in housing will be affected by a decrease in population.

In the next few years, investment in Estonia will be affected by several major infrastructure and government sector projects. In 2011 and 2012, the government sector will make a significant contribution by investing the revenue from unused AAUs⁵. This will be a one-off development, with the government sector investment

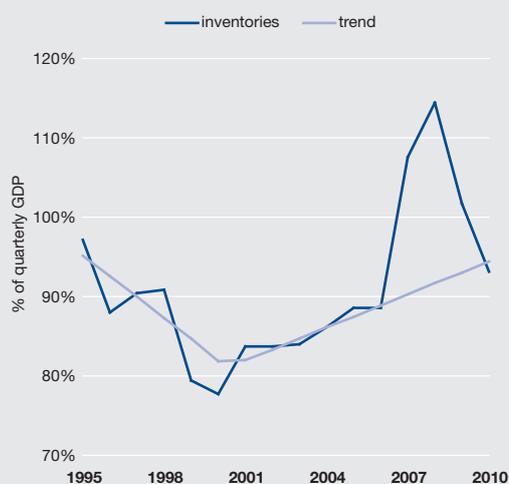
⁵ AAU – Assigned Amount Unit, Kyoto unit or carbon credit.

Figure 7. Gross fixed capital formation growth



Sources: Statistics Estonia, Eesti Pank

Figure 8. Inventories to GDP ratio



Sources: Statistics Estonia, Eesti Pank

consequently expected to decrease in 2013 (see Figure 7).

Inventories

In the fourth quarter of 2010, corporate stocks were approximately 95 million euros larger than in the corresponding quarter a year ago, with the stocks of manufacturing increasing by about 200 million euros, including computer, electronic and optical equipment production stocks of nearly 127 million euros. However, several fields of activity showed a year-on-year decrease in stocks – e.g. a decrease of 97 million euros in real estate and 64 million euros in construction.

Corporate stocks make up the majority of the inventories, and are also the biggest contributor to the change in inventories. The business stocks to GDP ratio has advanced after the Russian crisis of 1998, amounting to about 91% of the quarterly GDP in the fourth quarter of 2010 (see Figure 8). Aside from the boom years, when the deviation in the inventory ratio was attributable to quick price movements, and the recession, when the sudden decrease in GDP kept the inventory to GDP ratio at a high level, the inventory to GDP ratio has continually grown in the

past decade. However, future trends are very difficult to predict. On the one hand, the stocks to GDP ratio is quite high in Estonia. On the other hand, rising economic activity should contribute to further growth. Our forecast is based on the assumption that the stocks to GDP ratio will continue to climb, but it will fall short of its historical trends in the forecast horizon.

External balance and competitiveness

The Estonian economic recovery is fuelled by the faster-than-anticipated exports growth, which started in 2010, and the flexibility of Estonia's companies. Exports growth exceeded the expectations of the autumn forecast in the fourth quarter of 2010 and the first quarter of 2011. This was affected by improving global confidence and the faster-than-expected economic recovery of our main trading partners. In addition to the rapid growth experienced by the trade partners, Estonia's exports were also supported by the above average increase in global demand for the product groups manufactured in Estonia. Nearly a third of the strong export growth in recent months may be attributed to the improvement in the competitiveness of the Estonian companies (see Box 3).

Box 3: Market share of the Estonian exports in the EU internal market

The end of 2008 saw a sudden decline in global external trade flows. As a small and open economy, Estonia experienced a sharp fall in exports. Measured at current prices, goods exports hit rock bottom in the first quarter of 2009, standing nearly a third lower than the peak level. A greater-than-average drop on the European scale could also be seen in our main export markets – Finland and Sweden. In 2010, Estonia's exports enjoyed rapid growth, measured at current prices. The extreme pick-up in year-on-year growth indicators was caused, above all, by the low reference base. Still, at current prices, exports surpassed the pre-crisis peak of end-2008 already at end-2010.

The Estonian export growth over the past quarters has exceeded all institutional forecasts. This raises the question of whether we are dealing with one-off transactions characteristic to small nations. To which extent can export growth be associated with long-term effects in the changed economic structure? An exercise in decomposing export growth has thus been

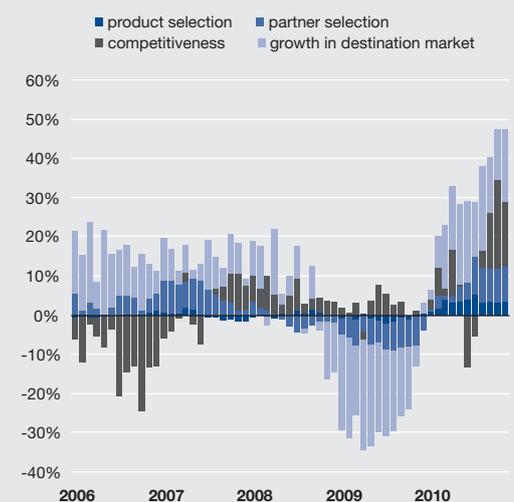
conducted to answer these questions. We applied the traditional shift-share analysis⁶, which allows decomposing export growth into the sub-components of destination market growth, growth caused by trading partners and the structure of export goods, and the residual. The latter is associated, above all, with competitiveness, i.e. with the ability to export on a greater scale than dictated by destination market growth and growth caused by trading partners and the structure of export goods.

The analysis has been conducted on the basis of COMEXT, the database for foreign trade statistics of the EU Member States. The database provides access to the monthly foreign trade statistics of all EU Member States. As a rule, changes in foreign trade have quite a prolonged effect. The more easily accessible annual data is thus often used for empirical analyses. However, as the fastest changes in Estonia's exports took place at the end of 2010, an analysis prepared on the basis of the annual data would not provide an adequate overview of the events. This analysis uses the BEC classification of goods.

The results for Estonia have been presented in Figure a. As it happens, growth in the residual – competitiveness – has been a major contributor to the growth in Estonia's exports throughout the period under review. Nearly a third of the rapid export growth at the end of the period may be attributable to growing competitiveness, with two-thirds attributable to the destination market and the specific needs of our export partners and export goods. The fact that our main export destinations in the Nordic countries have experienced faster-than-average recovery on a European scale has been a major contributor to Estonia's exports. The crisis triggered a sharp reduction in global investment activity, causing a decline in the demand for investment goods. The enhanced need for investment upon revival of production volumes has contributed to the quick recovery of the export of investment goods.

The contribution of competitiveness factors to growth in Estonia's exports is considerable. The analysis of the results across countries reveals that the contribution of competitiveness to export growth is quite similar in Estonia and Sweden. The positive contribution of competitiveness to export growth is clearly evident in both countries. The recent growth in Finland's exports, on the other hand, is only attributable to the characteristics of the destination market, partner countries and the structure of export goods.

Figure a. Estonia's exports to European Union (year-on-year growth)



Source: Eesti Pank

⁶ For detailed information on the shift-share analysis see Buechler (2007) "Enlargement of a customs union: a reduction in trade diversification".

The above analysis does not allow drawing far-reaching conclusions on future export growth. The contribution of competitiveness may reflect a level shift in export volumes or the beginning of longer-term positive development trends. In Estonia, exports have been significantly boosted by the growth in the production volumes of single companies. For example, the share of telecommunication equipment in our exports has more than doubled in the past 12 months, contributing more than 10% of the total exports of goods. Despite the considerable contribution of single exporters, broad-based growth in exports allows to claim that our exporters have succeeded in increasing their market share by enhancing competitiveness.

The Estonian external environment is strongly supported by the external demand of non-euro area countries (Sweden, Latvia, Lithuania and Russia). Measured at current prices, the exports of Estonia's goods to these destinations grew by 35% in 2010. With 57.5%, intermediate goods were the biggest contributor to Estonia's foreign trade in 2010, referring to the orientation of the industry to subcontracting and dependence on foreign suppliers. In 2010, external demand growth was rapid in all major branches of industry, with the exports of machinery and mechanical equipment being the largest contributor to exports, growing by 56% year-on-year.

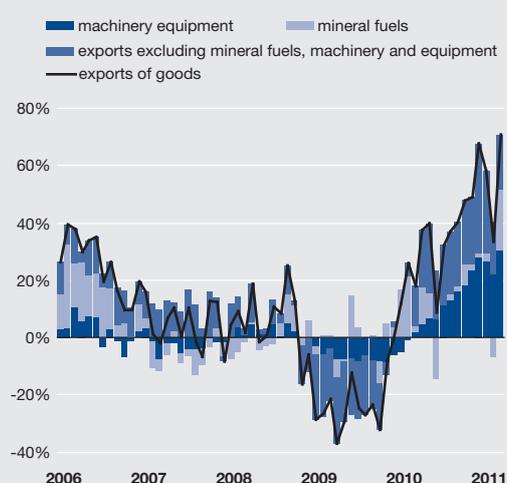
Trade within the euro area is expected to show stable growth in the years ahead, and it will be slower than growth in non-euro-area trade. The exports of electronic equipment is increasing, supporting the development of more capital-intensive exports.

The exports of mobile phones and related equipment has shown a significant increase in the last few months. For example, the wide-scale production of innovative mobile network technology base stations is liable to raise the exports of more capital-intensive products and services, where Estonia's share is currently below the EU average. The exports of electronic equipment is on the increase, and its share in total exports is growing. In March, the Estonian export turnover rose to an annual 71%, posting a record level of 1.07 billion euros. This growth was mainly supported by two groups of goods. Approximately

43% was attributable to growth in the exports of machinery and equipment, and 30% to growth in the exports of mineral products (see Figure 9). Without these two components, annual export growth would have amounted to 19% in March.

This may cause high volatility of export figures also in the future. The forecast is based on the assumption that the exports of electronic equipment will remain high, but its contribution to the general growth in exports will be smaller. Maintaining the quick export growth in the coming years will prove a complicated task, considering the huge volumes and quick recovery of exports.

Figure 9. Annual export growth



Source: Statistics Estonia

In 2012, export growth is expected to slow to 4.7% and stabilise at the level of 6.4% in 2013.

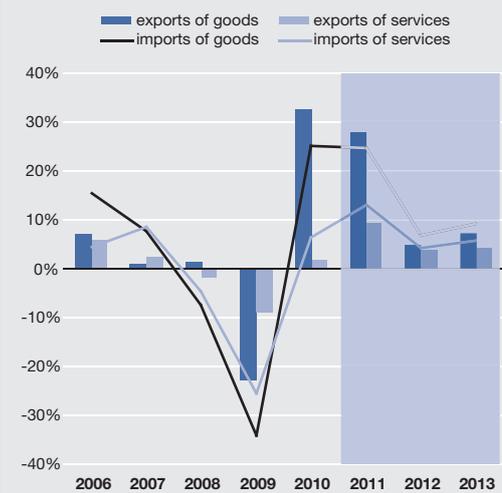
The outlook for export growth corresponds to external demand developments. Although Estonia has succeeded in continually gaining market shares, these trends are not expected to go on in the same extent over the forecast horizon. In the next few years, export growth will be hampered by little investment in the enhancement of production capacity over the past two years, and by recovering domestic demand generating more orders from the domestic market (see Figure 10).

Services export growth will be slower than the goods export growth throughout the forecast horizon, but it will be more stable, since it is less dependent on the economic activity of the trading partners. Similarly, services exports did not contract as much as goods exports during the recession. At the same time, increase in the exports of goods will fuel transport services growth.

Even though the recovery of external demand boosted exports, its effect on net exports was less significant, as imports also showed rapid growth.

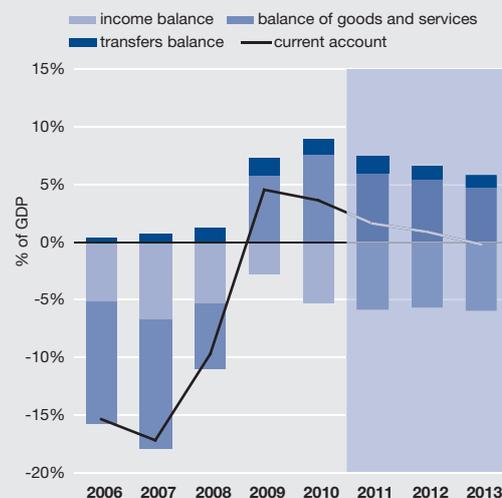
Goods and services imports will show a strong growth in 2011, supported by increasing export inputs and raw material imports. Considering the recuperation of domestic consumption and implementation of postponed investment decisions, import growth is expected to outpace export growth over the forecast horizon. The current account balance for 2011 and 2012 has been improved, compared to the previous forecast. The current account surplus is generated by strong growth in the exports of goods and services, especially by the balance of services. The current account balance for 2013 will be negative, mainly due to improved corporate investment activity (see Figure 11).

Figure 10. Exports and imports (year-on-year growth)



Source: Statistics Estonia

Figure 11. External balance



Source: Eesti Pank

Estonia's gross external debt was reduced by 5% in 2010, amounting to 16.6 billion euros at end-2010. Gross external debt is also expected to decrease in 2011, because the reduction in the reserve requirement from 15% to 2% (the norm in the euro area) allowed banks to pay back part of their external debt. Banks have also succeeded in increasing the share of resources engaged from the domestic market. The combination of these factors will reduce the gross external debt to 100.9% of the GDP in 2011 and to 88.2% of the GDP in 2013, thus reaching the level of 2006.

Labour market

The labour market adjusted to the crisis through three channels – a decline in employment, a decline in working hours per employed person, and a slight decline in wages per working hour. Changes in the compensation of employees followed the change in GDP at current prices with a two-quarter time-lag. The adjustment in the labour market significantly reduced the wage and productivity gap, which had emerged in the boom years.

Recent developments in employment, working hours and wages indicate that the adjustment of the labour market through a decrease in employment, working hours and wages has been completed. Compensation per employee started growing already in the second half of 2010, with the increase being slower than growth in labour productivity per head. Unit labour costs decreased and the profit margins increased. Due to the time-lag between economic growth and wage adjustments, there is a risk that the acceleration of economic expansion in the first half of 2011 will generate a wage growth that is faster than the productivity growth in the middle of the year, when the economic growth rate will have decelerated to a sustainable path. In this case, labour costs will again exceed economic growth, generating inflationary pressures.

Employment and productivity

Labour demand as reflected by the total hours worked started growing in the second quarter of 2010 – two quarters later than the real GDP. Hours worked per employee, which were scaled down during the crisis, were the first to start recovering. Employment in persons started increasing from the third quarter. Due to the stronger-than-expected recovery in the manufacturing sector, the rate of growth in employment and drop in unemployment in the fourth quarter of 2010 and the first quarter of 2011 exceeded our previous forecast. Total employment grew by 2.1% in the last quarter of 2010 and by 6.8% in the first quarter of 2011.

Contributors to total employment growth included also the Estonian residents working abroad, especially in the fourth quarter of 2010. These people are covered by the Estonian employment statistics, since Estonia remains their permanent residence even while working abroad, and they are thus closely related to their home country. The phenomenon is also referred to as pendulum migration. Construction, transportation, storage and manufacturing are the most popular fields of activity for Estonian residents working abroad. It is quite obvious that the recession in the local construction sector, strong recovery of the Scandinavian countries and the large gap in relative wages favoured pendulum migration. With the recovery of the construction sector, the effect of such “push factors” will be reduced. In the forecast, we assume that domestic and national employment will grow at the same rate. This could be considered a conservative or neutral assumption. Whether the Estonian residents working abroad will migrate permanently or return to their homeland when the situation improves is an important issue in preparing long-term forecasts and assessing the economic potential.

Even though the first quarter of 2011 experienced exceptionally rapid employment growth, it

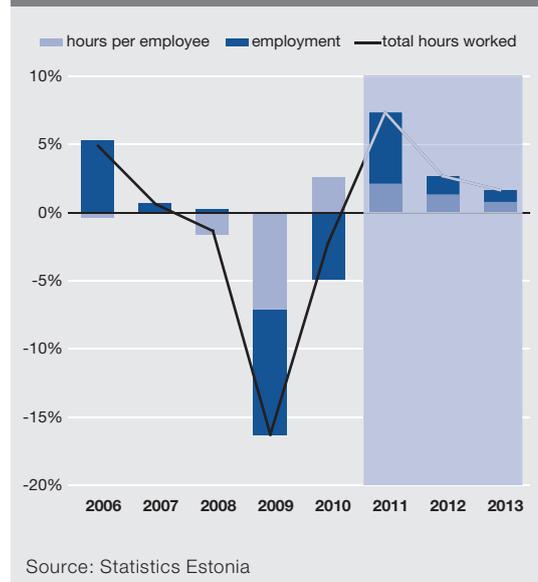
is unlikely to be a one-off rise. Conjunctural indicators for the second quarter and statistics on registered unemployment point to a continued strong growth momentum. Peaking in the second quarter of 2010 at 18%, registered unemployment fell below 10% in May 2011. According to the forecast, employment growth will decelerate in the coming years and the number of the employed is expected to reach the pre-boom level of 2005-2006 in 2013. The increase in the number of working hours will be the highest in 2011, and will continue at a slower rate until the end of the forecast horizon (see Figure 12). Employment is expected to grow mostly in the private sector in 2011–2013. Employment in the government sector is forecasted on the basis of the State Budget Strategy, which establishes strict limitations on the increase in public sector labour costs. Still, working hours per employee will grow in the public sector as well, due to the gradual restoration of working hours that were scaled down for budget consolidation purposes.

The flexibility of companies and their ability to cope with the consequences of the crisis has enhanced production efficiency and increased labour productivity. Quick productivity growth in 2010 is partially related to the labour market's lagged response, to the decline in demand – many companies did not adjust their staff to the contraction in production volumes before the beginning of 2010. With the temporary factors receding, growth in productivity decelerated in the last quarters and it will converge to its long-term annual rate of 3–4% in the forecast period, as is determined by technology and human capital growth.

Unemployment

Unemployment growth was the price the Estonian economy had to pay for the crisis. Unemployment amounted to 19.8% in the first quarter of 2010 – according to the available statistics, the highest level after Estonia regained inde-

Figure 12. Growth in the number of hours worked



pendence. By the time the forecast was compiled, unemployment had decreased by nearly 5 percentage points, significantly exceeding our previous expectations and attesting to the flexibility of the Estonian labour market. The unemployment depletion rate will decelerate in the coming years, but a downward trend is expected to continue for the entire forecast horizon.

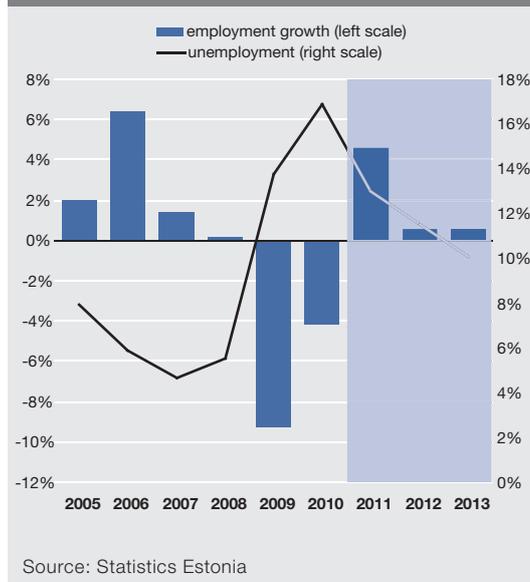
The estimated unemployment rate depends on employment and the economic activity of the working population – i.e. the activity rate. The rise in activity rate in 2006 has proved more sustainable than expected. Firstly, this can be explained by the change in the age structure of the working population – the large birth cohort of the Singing Revolution reaching the best working age where the activity rate is the highest. Secondly, due to the gradual raising of women's retirement age, the activity rate of older women has risen. The number of the discouraged, i.e. those who have given up hope of finding a job, has not significantly increased. This is probably attributable to positive developments in the economy and

changes in labour market regulations. We do not expect a large increase in the number of people giving up their search for a job in the forecast period. The unemployment rate will drop in the coming years, fuelled mainly by employment growth, and dropping below 10% by the end of the forecast horizon (see Figure 13).

The unemployment rate will decline in the forecast period, but the share of long-term unemployment will increase. A further drop in unemployment is progressively hindered by the gap between the qualification and geographical location of the unemployed and the needs of employers. The skills of people who lost their job during the crisis might not correspond to the needs of the recovering labour market and the retraining of the unemployed and enhancement of their qualification is time-consuming. Indeed, the duration of unemployment itself will lower the probability of finding a job – over time, the search intensity will wane, and competitiveness will decrease. Structural unemployment will thus remain high for the time being and the employers' difficulties in finding suitable employees might result in higher wage offers. This, in turn, will endorse wage growth that exceeds productivity growth and generate inflationary pressures.

Labour market policy reforms support a quicker shrinkage in long-term unemployment than after the Russian crisis. In recent years, labour market institutions have been reformed, and measures targeted at the unemployed have been efficiently developed. The budget funds assigned to active labour market measures have also substantially increased. Health insurance, which is offered to all the registered unemployed since 2009, represents a policy measure that urges to continue the search. While a year ago, the main target group consisted of young people entering the labour market, labour market measures in the coming years should be directed towards the activation of those who have been unemployed for a long period of time.

Figure 13. Employment and unemployment



Wages and labour costs

Labour cost growth will gradually accelerate in the coming years, with several channels exerting wage pressures. The strong productivity growth and enhanced profitability of the exporting sector will allow to restore performance pay and motivational wages there already in 2011. The number of orders in the construction sector, which experienced the deepest contraction in employment during the recession, will start growing, fuelled by growing investment activity. According to the labour force survey, a considerable number of the Estonian residents have left to work in the construction sector abroad after the crisis. Thus, with the increased labour demand in the construction sector, the supply of skilled workers may prove to be too low, regardless of the high rate of general unemployment, exerting wage pressures.

Wage growth in the private sector and the relatively large drop in purchasing power in 2010–2011 are expected to generate wage pressures also in the public sector. The wages in education

that were cut as a part of state budget consolidation measures have not been restored yet and the Estonian Health Insurance Fund has decided not to raise the prices of health services to the pre-crisis level for 2011. Due to strong economic growth and good tax revenues, it will be increasingly difficult for the government to stand up to the wage pressures.

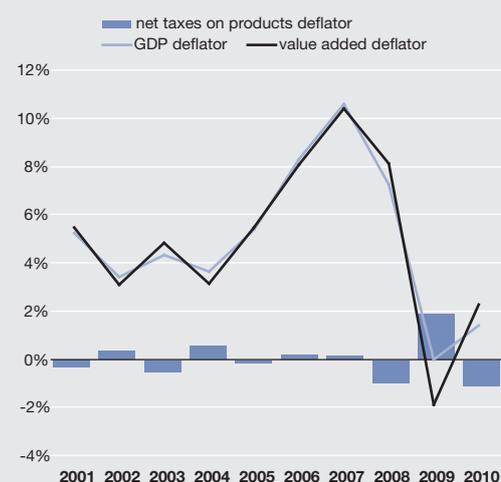
Even though trade unions play a much more modest role in wage regulation in Estonia than in other European countries, they could serve as coordinators of wage demands in the current economic growth stage. The minimum wage was last raised in 2007, so we may also expect intense negotiations on minimum wage this autumn, especially considering the rapid food price increase. This exerts the strongest impact on the receivers of the minimum wage, as food makes up a large share of their consumer basket. The unused labour resource – the unemployed – remains the main factor curbing wage growth. In the public sector, wage growth is restrained by conservative fiscal policy which sets limitations on the growth in government-sector labour costs. We expect wage growth to accelerate to nearly 7% per employee in 2013 (see Figure 15).

Prices

Inflation has been highly volatile in Estonia in recent years, due to both domestic and external factors. Inflation⁷ slowed to 0.2% in the downturn in 2009, when the prices of the main goods groups decreased in the second half of the year. Without the indirect tax increase, prices would have fallen by nearly 2.5% and the GDP deflator by 2% in 2009 (see Figure 14). When global economic activity started to recover, inflation gained momentum in three stages. In the first half of 2010, the price of imported energy showed the biggest increase. Fuelled by crude oil price hikes, the inflation of motor fuel amounted to 32% in April 2010, year-on-year.

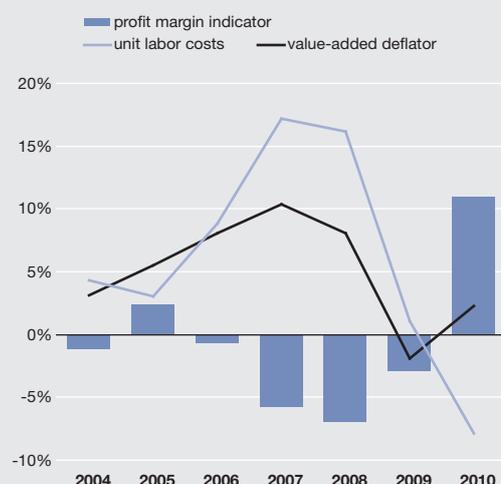
⁷ The chapter refers to the Harmonised Index of Consumer Prices (HICP).

Figure 14. Growth rates of deflators



Sources: Statistics Estonia, Eesti Pank

Figure 15. Profit margin indicator growth



Sources: Statistics Estonia, Eesti Pank

The global price of all main commodities continued to rise in the second half of the year, with the prices of food and industrial raw materials posting new records. The main difference from the last rapid price increase period (2007-2008) was the lower inflationary pressure exerted by domestic demand factors.

Estonia's general price level showed no changes upon the adoption of the euro in January 2011. This may have been due to consumers' caution, which was mainly reflected in the contraction of retail sales volumes. The price increase of some

goods and services is nevertheless attributable to the changeover. Its total effect on inflation amounted to an estimated 0.3 percentage points (see Box 4). In February, consumer prices rose by 5.5%, year-on-year, declining to 5.1% due to the high reference base in March. The key contributors included a sharp increase in the price of certain food commodities (above all, coffee and sugar), as well as the abnormal volatility of fruit and vegetable prices. April saw the unexpectedly broad-based food price growth continuing, which boosted inflation to 5.4%.

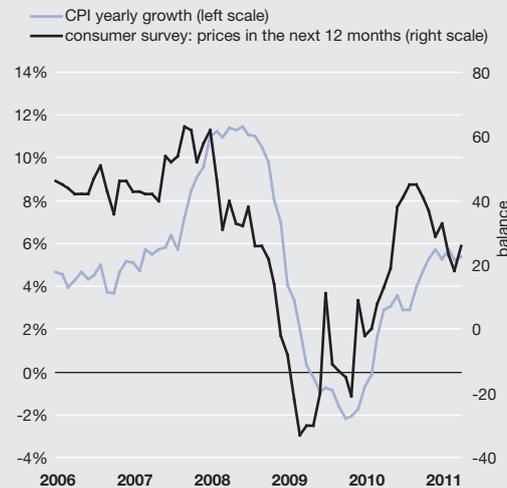
Box 4. Inflationary effects of the adoption of the euro in Estonia

On 1 January 2011, Estonia became full member of the European Monetary Union, with the euro introduced as legal tender. The rise in the inflation expectations of households in the second half of 2010, as registered by the consumer survey of the Estonian Institute of Economic Research, reflected fears of a price increase related to the changeover to the euro. Inflation expectations retreated in the first quarter of 2011, as the euro did not trigger a price hike (see Figure a). Our calculations show that the faster than usual growth of CPI components from December to March contributed 0.3 percentage points to inflation. According to Eurostat, the euro's impact on inflation was 0.2–0.3 percentage points⁸.

In January, the consumer price index increased by 5.3% year-on-year, with the price level remaining unchanged from December 2010. The monthly growth was lowered by 0.1 percentage points by the decrease in the price of electricity and gas, but it is likely companies avoided raising prices in January due to increased public attention and temporary weaker demand.

Changeover to a different currency may impact inflation in several ways and it may cause a temporary acceleration in price growth. First of all, prices may rise more than usual due to consumers'

Figure a. Consumer price expectations and CPI inflation



Source: Statistics Estonia, Estonian Institute of Economic Research

⁸ See http://epp.eurostat.ec.europa.eu/portal/page/portal/hicp/documents_pub/Euro_changeover_report_EE.pdf.

lower price sensitivity, since it is more time intensive and thus costly to qualify prices as high or low in the new currency. This effect was not confirmed by retail trade data in the start of the year, which show that people's insecurity made them postpone consumption rather than step it up.

Second of all, changing prices (reprinting of restaurant menus and price tags, for example) entails costs. During the changeover, companies had to change price lists and cover the related expenditure anyway, so the marginal cost of changing prices was zero. Thus, *ceteris paribus*, it can be expected that price movements will be more frequent and input prices will pass through to consumer prices more extensively.

The third way how the adoption of the euro may affect inflation is rounding and psychological price setting. For instance, the prices of tickets, services and menu items tend to end in zero or five, whereas food and clothing prices often end in nine. Several other inflationary economic processes, such as the recovery of demand after the downturn, the hike in commodity and oil prices in the global market, and growing external demand for the Estonian products may increase the relative frequency of upward rounding.

In order to analyse the impact of the euro, we conducted a study of the CPI sub-indices to discover unusual price movements from December 2010 to March 2011. The same method was also used by Eurostat to assess the impact of the euro adoption in Estonia and by the Institute of Macroeconomic Analysis and Development of the Slovenian government to do the same for Slovenia⁹. We excluded from our calculations the prices of food, fuel and transport services, since these were affected by commodity price developments. Administered prices were also excluded. Larger than usual increases were found mainly for various services and for goods and services related to spending leisure time. All in all, the contribution of the faster-than-usual growth to inflation over the four months under review was 0.3 percentage points, which broadly coincides with Eurostat's assessment.

Although the described method has been used in several studies, there are some serious caveats that need to be mentioned. On the one hand, it underestimates the effect of the euro adoption, because it only looks at the historically abnormally high growth rates, whereas the impact of the euro may remain within the normal range. In addition, the changeover may have increased the pass-through of the commodity price hike to the prices of goods excluded from the study. On the other hand, it may overestimate the effect of the euro, since part of the price growth included in the calculations may have been caused by commodity prices. For example, costs in catering facilities increased because of food price growth. To conclude, it can be said that the adoption of the euro does affect inflation, but it is hard to quantify. In order to get more exact results, it would be necessary to analyse detailed data on prices instead of price indices, but these are not available.

⁹ See http://www.stat.si/doc/evro/euro_changeover_effect_on_inflation_in_slovenia-imad_02mar07.doc.

The inflation forecast has been significantly raised, compared to the autumn forecast, with estimated inflation for 2011 amounting to 4.7%. Still, the key factor – commodity price increases in the global market – has retreated by now. The short-term consequences for consumers would mainly include a drop in the price of motor fuel. In the medium term, this could contribute to the stabilisation of the general price level. By the beginning of 2012, inflation is forecasted to slow to 4%. The inflation rate will decelerate in the fourth quarter, partially due to a change in the reference base.

In 2010, companies succeeded in recovering a bulk of their profitability lost in the wage race in the previous four years. Some branches (e.g. the food supply chain) could raise prices beyond the increase in the price of their production inputs. The profit margin indicator¹⁰ rose by more than 10% in 2010, mostly as a result of the 7.8% contraction in unit labour costs (see Figure 15).

In 2012-2013, the main risk related to the inflation forecast will be the intensification of second-round effects of the price increase, especially in the non-tradable sector. In order for unemployment to continue to decrease, wage growth must be in line with productivity growth. The forecast sees a decrease in real unit labour costs in the forecast horizon.

Food

The broad-based increase in the price of food started in the fourth quarter of 2010, with the price of dairy and bread products soaring the most. The price level of these food products has shown stabilisation signs in recent months. The growing price of vegetables, coffee and sugar was the key contributor to inflation in the first quarter of 2011. April saw growth in the price of meat products. This was not unexpected, considering the previous increase in feed grain

¹⁰ Profit margin indicator is the ratio of the value added deflator and nominal unit labour costs indices.

prices. Fuelled by the raised excise duty, the price of tobacco products went up by 9.8% in March-April. This will contribute 0.2 percentage points to the 2011 inflation.

Considering the abrupt increase in the price of food in Estonia, compared to other euro area countries, it would be increasingly difficult to find ground for a further rise in food prices. The annual increase in the price of food amounted to 11.5% in April 2011, and it is expected to decline to 5% by the end of the year. Based on futures contract prices, the price of cereals in the global market is expected to remain high in the second half of the year, contributing to the sustained high price level of processed food, such as bread, meat and milk. An improvement in weather conditions could result in a year-on-year fall in the price of fruit and vegetables.

Energy

Energy price, which has been the major source of forecast revisions, will grow by nearly 7% in Estonia in 2011. The price of crude oil rose from 80 USD per barrel in autumn to 120 USD in April-May. It is assumed that the price of crude oil will not change significantly in the forecast period, and the markets are expecting crude oil prices to decline to 104 USD per barrel by 2013.

Electricity and thermal energy prices will continue to increase in the second half of 2011. In August, network charges will raise electricity price by 6%. It is expected to soar further in 2013, due to the opening of the electricity market. The extent of the price increase is still unclear, as it depends on a multitude of factors. The forecast assumes a 20% increase in the price of electricity, directly contributing 0.7 percentage points to inflation.

As the new price formula enables Estonia to import natural gas at a more favourable price than in 2010, the price of natural gas for households dropped by 8% in January. The previous oil price increase will pass through to ther-

mal energy prices with a time-lag of up to nine months. On the whole, the increase in the price of thermal energy in the second half of the year will be smaller than previously forecasted.

Core inflation

Core inflation remained below 2% in the first quarter, though its composition indicated some unfavourable developments. Services inflation advanced to 3.4% in April, and it was broad-based. The main reason lies in the energy price hike and wage growth. Furthermore, it has been easier for the services sector to raise prices after the adoption of the euro. Rent increases have to do with the real estate market showing signs of recovery.

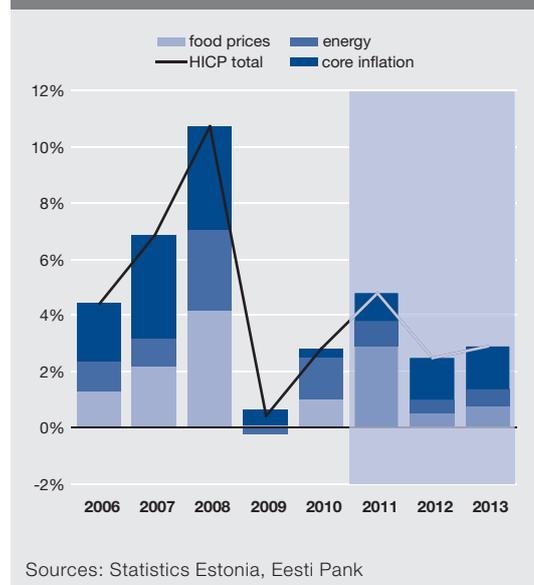
The price movements of industrial goods have not deviated much from their usual seasonal pattern. The recent increase in the price of vehicles is an exception, and can be attributed to growth in demand, production difficulties in Japan, as well as the upcoming one-third rise in customs duties in CIS countries. The sharp rise in the price of metal, cotton and fibre in the global market in the fourth quarter of 2010 and at the beginning of 2011 constitutes a risk. These factors have not yet totally passed through to import prices. Nevertheless, industrial goods inflation should not differ much from the average in the euro area in the long term, considering competition.

The core inflation rate is expected to gradually pick up over the forecast horizon together with the recovery in economic activity, amounting to 2.8% in 2013 (see Figure 16).

General government

The Government is not planning major changes in fiscal policy for the period under observation. In 2011–2012, fiscal balance will still be largely influenced by the consolidation measures of 2009 and issues related to trading with AAUs. One-off and temporary factors significantly influence both the

Figure 16. Inflation



government revenues and expenditures. The level of expenditures and revenues is also shaped by large funds from the budget of the European Union.

General government revenues

Although the Estonian economy started recovering already in the fourth quarter of 2009, no rapid growth in tax revenues has occurred. This is mostly because the pick-up in Estonia's economic growth has mainly been export-driven, and it will take time before export income starts bolstering the growth of such domestic demand components which yield greater tax revenues. In addition, the income from selling assets and the withdrawal of dividends, which temporarily picked up during the downturn, started to decrease this year. The tax revenue forecast relies on an assumption that tax rates will remain the same (excluding the tobacco excise tax, which rises 10% at the beginning of 2012 and 2013) and the one-off and temporary measures adopted during the recession will be terminated. The government will restore payments to the second pillar of funded pensions. Technically,

this means that the tax burden will decrease. The fiscal burden will decrease owing to the less tax rich GDP structure from the level of 2010 by 1.5 percentage points to 32% of GDP by 2013.

General government expenditures

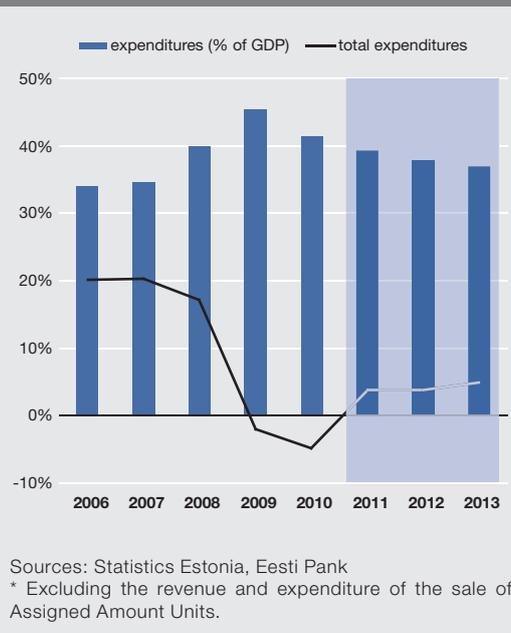
According to the national fiscal strategy, the government's aim is to restore the budget surplus by 2013. In order to achieve this, the government should use the increasing tax revenue primarily to improve its fiscal position. In addition, the forecast assumes that old-age pensions will start increasing in line with the index again from the next year – this will entail a moderate increase in social transfers. The latter are partially offset by shrinking unemployment related expenditures. Increasing expenses more slowly than taxes is sensible not only when recovering from an economic downturn, but also in the long run (see Figure 17).

Fiscal balance and debt

In the forecast period, the nominal balance of the state budget will be strongly influenced by the income received from the sales of AAUs and the expenses made on their account. The income from the sales of AAUs will improve the fiscal balance of 2010 and 2011 by 1.1 and 0.4 percentage points in ratio to GDP, respectively, but the expenses incurred on their account will increase the 2012 budget deficit by 1.3 percentage points. In 2013, after the effects of sales of AAUs and other short-term factors have abated, the consolidated budget will reach a small surplus.

Structural budget balance, i.e. the fiscal position indicator that excludes the cyclical impact and temporary measures, will be in surplus throughout the entire forecast period and will remain virtually the same. This means that the government is not implementing discretionary fiscal policy and the nominal fiscal balance will improve owing to the recovery of the economy's cyclical position (see Figure 18).

Figure 17. General government expenditure growth*



The government sector's debt burden declined to 6.6% of GDP by end-2010. Compared to end-2009, nominal debt remained almost the same, decreasing by 40 million euros to 950 million euros. The shrinkage in government debt to GDP ratio mainly stemmed from GDP growth. The government sector's debt burden is expected to remain at 6-7% of GDP throughout the forecast period. Since, according to the forecast, the central government and local governments will run deficits in the forthcoming years, they are expected to borrow, while social insurance funds with surpluses will increase their reserves.

Banking sector and financing of the economy

Credit supply

So far, the euro area's debt crisis has only affected single countries and has not spread all over Europe. In Sweden, the measures adopted by regulators to cool off the real estate sector

have not entailed any setbacks to the real economy. The parent banks' financing conditions of banks operating in Estonia are comparable to those six months ago. Although Swedish banks are generally better capitalised than other European banks, they are still very sensitive to market developments and to prevailing trends due to their relatively smaller share of deposits. In this context, it is necessary to consider the risk related to Swedish real estate prices, which, may exert substantial negative influence on the entire Estonian financial system through the financing of parent banks.¹¹

The situation of banks in Estonia is improving. Although the volume of non-performing loans is still large, their stock in the portfolio is expected to decrease in the coming years. The banking sector is posting profits again due to contracting loan provisions and decreasing financing costs. Capitalisation is strong and there are enough funds for lending available in the local market. The loan market analysis¹² indicates that although large companies have an advantage, banks are willing to take risks and fund projects that are necessary for sustainable economic growth.

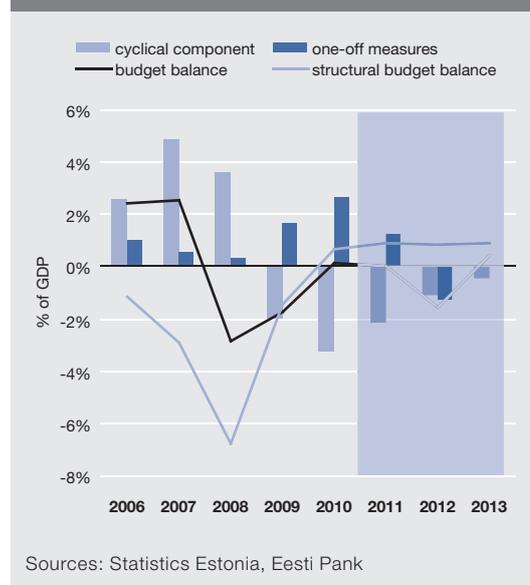
Interest margins of loans to households, which had soared during the global downturn, abated by the end of the first quarter of 2011. Since the economic environment is improving, both household and corporate loan interest margins are expected to decline.

Considering the current capital buffer and the expected improvement in capitalisation, the planned tightening of the Basel III capital regulation will not exert a strong direct influence on the lending capacities of local banks or the branches of foreign banks operating in Estonia. Meanwhile, the higher capital requirements imposed on European banks may affect the financing envi-

¹¹ See Financial Stability Review No 1/2011.

¹² See Lending Review No 1/2011 (in publication).

Figure 18. Fiscal stance



ronment of banks in general and influence the local lending conditions through parent banks.

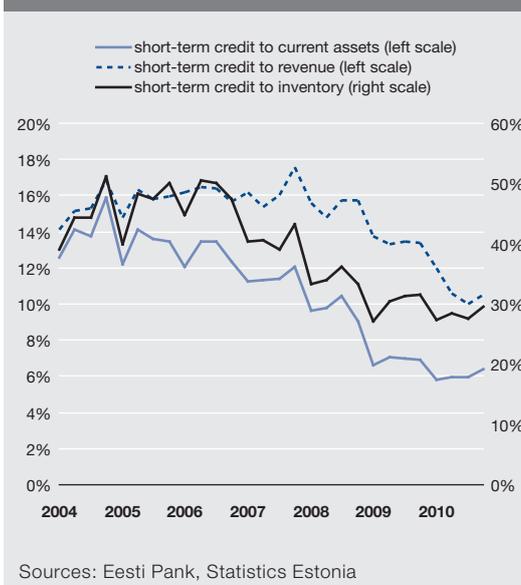
Credit demand

The investment structure of companies in the new economic cycle is different: less is invested in real estate and more in machinery and equipment. As the latter investments are smaller, they also require less loan resources and therefore, credit has less impact on the new growth cycle. While credit demand was low at the start of 2011, some growth may be expected in the second half, when companies start requiring additional funds to finance their investment. Although credit demand is also expected to increase due to growing investments, several factors may restrain companies' desire to borrow. Compared to earlier periods, investment is increasingly funded from different sources such as equity and foreign borrowing. In addition, the high debt burden of the non-financial sector may curb companies' wish to take on new long-term liabilities.

In 2010, companies continued to repay their loans and increase equity, reducing their dependence on external financing sources. The loan stock of companies declined by over 0.4 billion euros within the year, while equity increased by a total of 2.7 billion euros. The amount of new loans and leases granted to companies in the first quarter of 2011 rose by 10% compared to last year, primarily owing to growth in the short-term loan volume. In the coming quarters new loans will increase mainly due to short-term financing, which is increasingly needed in the improving economic environment as companies' operations are expanding. Using short-term credit to finance companies' operations was exceptionally low at the end of last year – therefore, due to the recovering and growing operating capacity, the use of this financing source is expected to grow (see Figure 19).

Positive labour market developments boost the confidence and incomes of households, which gradually increases their willingness to obtain new loans. Real estate has remained affordable, which fosters the improvement of demand. This, in turn, motivates developers to build new housing. The housing loan market has recovered more modestly than expected – in the first quarter, the amount of housing loans issued was just 4% larger than a year ago. In the second half of 2011, however, the borrowing activity of households is expected to pick up. In the long run, growth in the stock of housing loans will be driven by the currently very low share of financing real estate purchases with loans, which is expected to increase. Household consumption is increasing along with the improvement of the economic environment, but it is funded by current incomes and collected savings. Owing to the recent crisis experience, the financial behaviour of households remains cautious, which is expressed by the fact that compared to the previous cycle, fewer loans are obtained to finance private consumption.

Figure 19. Use of short-term credit to finance business activities



In 2011, the corporate and household loan stock is nonetheless expected to decline despite the increase in new loans issued. In 2012, however, the loan portfolio is expected to start growing again after four years of decrease (see Figure 20).

FORECAST RISKS

Productivity growth and declining labour costs have so far kept domestic price pressures in check and helped maintain low core inflation. This has been supported by ample underutilised production capacity and high unemployment. However, growing domestic price pressures are a significant risk factor in future periods.

The alternative scenario deals with the situation where the economic production potential is smaller than in the baseline scenario. This means the economy is already operating at a level that is unsustainable in the long run and the scarcity of production inputs causes additional price and wage pressures. The increasing likelihood of this

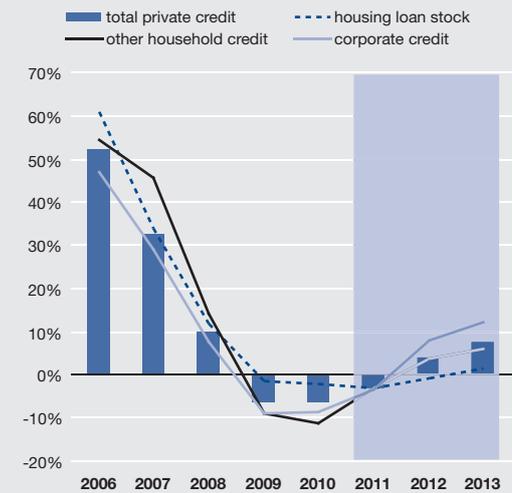
materialising is referred to by faster inflation and growing wage pressures against the backdrop of relatively high unemployment.

The below-baseline scenario production potential may derive from several factors. First of all, we may have overestimated the past potential, meaning that the boom-time rapid expansion pushed production volumes even further beyond the potential than it was thought. Another explanation may be that production potential was more damaged in the recession than stated in the baseline scenario. This might be because those who became unemployed during the crisis have either lost their skills or have very specific know-how, which is of no use in jobs created after the downturn. Another indicator referring to a possible decline in potential is the large number of people working abroad – they do not create value-added here. Decreasing working population and the mismatch between the unemployed and newly created jobs means employers have a smaller number of candidates to choose from than expected in the baseline scenario and they may fail to find a suitable employee. As a result, people who are well-positioned in the labour market may start demanding higher wages.

The mismatch between existing skills and new jobs does not, of course, mean that new employees will not be hired or that unemployment will not decrease. Companies do wish to expand production and new employees are hired for as long as it is profitable, but the usage of poorly skilled workers reduces productivity and the marginal profit. Lower labour force productivity means that it is necessary to hire more people, leading to stronger employment growth than assumed in the baseline scenario and giving rise to labour shortage.

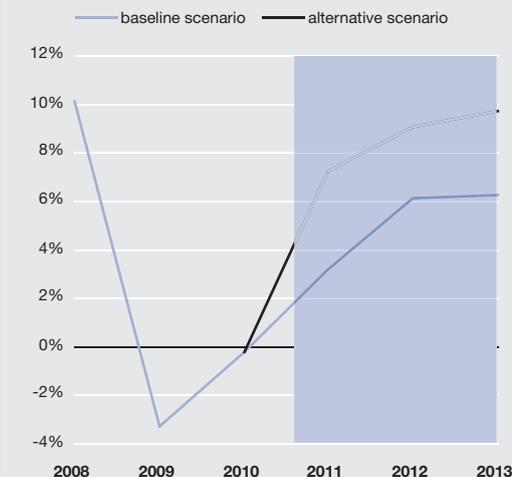
Skills do not conform to employers' expectations and there is also the risk of labour force leaving the country. Wage declines have already come to an end in most sectors and many private compa-

Figure 20. Credit stock growth



Source: Eesti Pank

Figure 21. Growth in compensation per employee



Sources: Statistics Estonia, Eesti Pank

nies have started to raise either basic wages or performance pays. Upward wage pressures are further intensified by the joint impact of labour shortage and structural mismatch. This will result in a short acceleration in economic and domestic demand growth, especially a faster restoration in private consumption. But if wage growth exceeds that of labour productivity, wage pressures will make production more expensive, inflation will pick up and export competitiveness will deteriorate (see Figure 21).